

Applicant claims in claim 38 a non-invasive powerline communications system comprising means for generating communication signals at a first location for transmission on a powerline, means for reactively coupling the communication signals to the powerline without tapping the powerline, and means for receiving said communication signals at a second location.

The Examiner states that Lau discloses all of the elements of the claimed invention except for “coupling the communication signals to the powerline without tapping the powerline”. The Examiner also states that Johnson discloses coupling the signals to the powerline without tapping, and that the combination of the references renders the applicants’ claims unpatentable.

However, the applicant submits that Lau, in addition to the failure to disclose a system which does not tap the powerline, also fails to disclose transmitting the communication signals on the powerline as claimed by the applicant. Lau discloses sending IF radio signals which include data obtained by the sensors. See Col 5, lines 54-60 of Lau. However, Lau fails to disclose, teach or suggest transmitting the communications signal over the powerline as claimed by the applicant.

Lau clearly discloses that the communication signals are not sent over the powerline. Lau specifically states that “the invention is described herein as comprising of RF transmitting and receiving means in each of the fault sensors and in a ground station at a designated location 29. A ground station communication equipment antenna 30 is used to transmit and receive information. All fault sensors transmit data on a single frequency channel for reception by the ground station antenna 30.” Column 10, lines 19-25 and Fig. 9 of Lau. Lau transmits the communication signals directly from the sensor devices to a ground station antenna; the signals are not transmitted over the powerline. This is clearly

shown in Fig. 9 of Lau.

Additionally, Lau states that “in the underground fault sensor 17 the signals are sent to and from the microprocessor 11 through a fiber optic cable to and from the transceiver 3, which has a patch antenna 20 located on a vault”. See Col 8, lines 46-49 and Fig. 8C of Lau. This passage of Lau makes it clear that with the underground sensor, the communication signal travels from the sensor via a fiber optic cable to an antenna, and is then transmitted by the antenna to a ground station. This also demonstrates that Lau does not transmit the communication signals over the powerline.

Accordingly, Lau fails to disclose means for reactively coupling the communication signals to the powerline without tapping the powerline as claimed by the applicant.

With regard to obviousness, the law is clear that:

When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) (“the central question is whether there is reason to combine [the] references,” a question of fact drawing on the Graham factors).

“The factual inquiry whether to combine references must be thorough and searching.” Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) (“a showing of a suggestion, teaching, or motivation to combine the prior art references is an ‘essential component of an obviousness holding’”) (quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”); In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the

desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (“teachings of references can be combined only if there is some suggestion or incentive to do so.”) (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references”).

In re Sang Su Lee, 277 F. 3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

Lau does not disclose, teach or suggest coupling the communication signals to the powerline at all, let alone coupling the communication signals to the powerline without tapping the powerline as claimed by the applicant. In contrast to the present claimed invention, Lau specifically teaches a system which taps the powerline via eyescrew 9 (see Col 5, line 65 – Col 6, line 7 and Fig. 1 of Lau) and which does not transmit the communication signals over the powerline. Nor does Lau provide any motivation to alter the sensor of Lau by incorporating features of Johnson.

As Lau does not disclose, teach or suggest coupling communication signals to the powerline, and Lau fails to disclose, teach or suggest coupling communication signals to the powerline without tapping the powerline, the applicant submits that claims 38-39, 41-57,

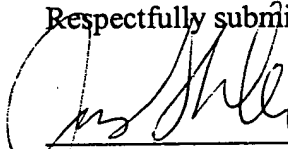
63-64 and 67 are patentable over the cited references.

The Examiner also rejects claims 58-62, and 65-66 under 35 U.S.C. §103(a) as being unpatentable over Lau in view of Johnson and further in view of U.S. Patent No. 5,559,377 to Abraham. However, for the reasons stated above, the applicants submit that this combination of references also fails to render the applicant's claims unpatentable.

Each of the Examiner's rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts, at (781) 890-5678.

Respectfully submitted,



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